DEQ

Michigan Department of
Environmental Quality

# *UNDERGROUND STORAGE TANK PROGRAM OVERVIEW*


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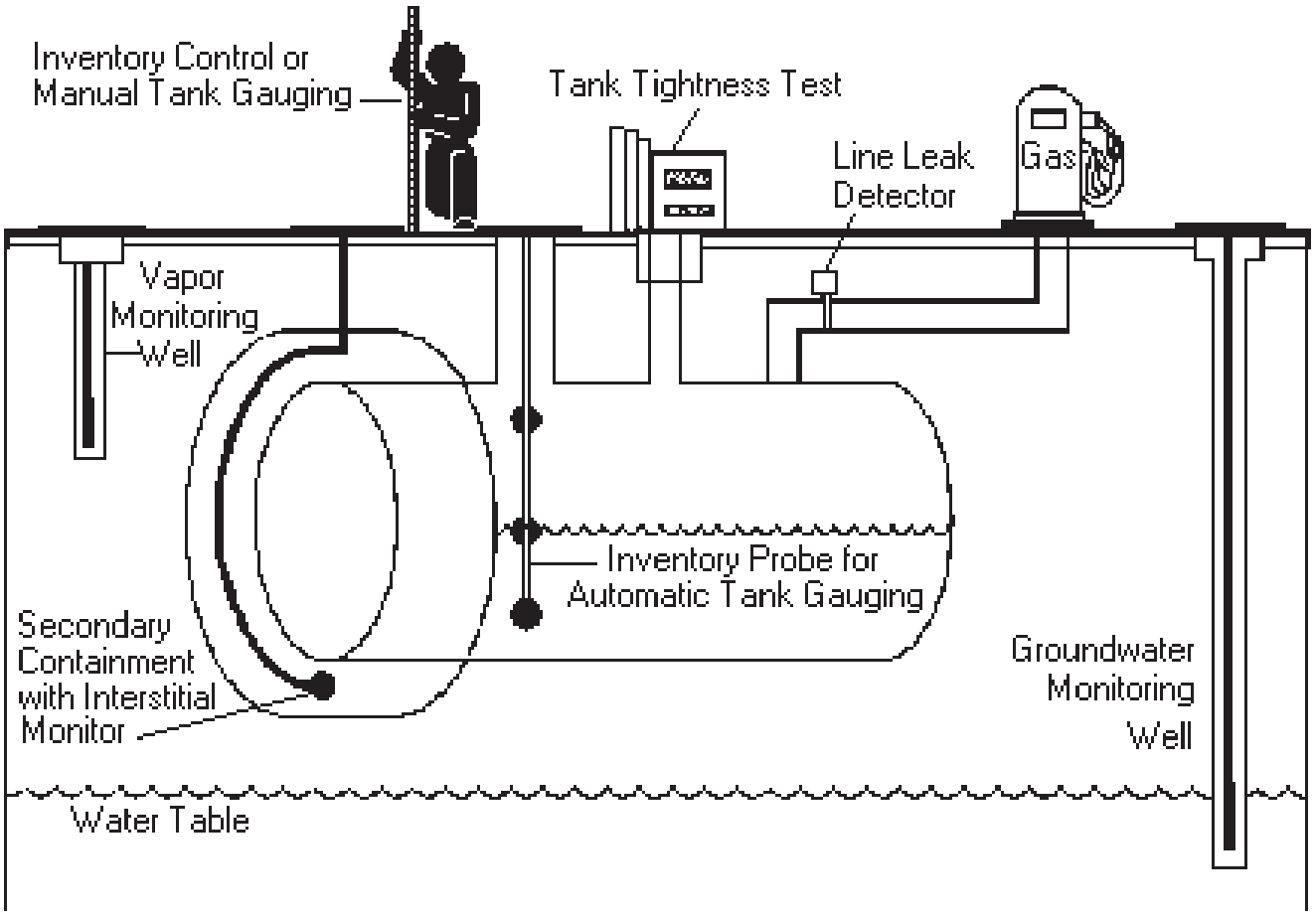
## Introduction

The Michigan Department of Environmental Quality, Waste and Hazardous Materials Division (WHMD) is responsible for the protection of public health, welfare and the environment from underground storage tank system (UST) leaks and fire safety hazards associated with underground storage tanks. The Underground Storage Tank program within the Storage Tank Unit regulates the design, construction, installation and operation of certain underground tanks storing petroleum products, flammable and combustible liquids (FL/CL), liquid petroleum gases, and regulated chemicals for purposes of fire safety and preventing the release of regulated substances into the environment. Tank installation plans are reviewed and tank inspections are performed on all new tanks required to be registered. This program also collects annual registration fees. USTs are regulated under the authority granted by Part 211 of the Natural Resources and Environmental Protection Act 1994 PA 451, as amended, the Storage and Handling of Liquid Petroleum Gases (LPG), the Storage and Handling of Flammable and Combustible (FL/CL) Rules, and the Michigan Underground Storage Tank rules (MUSTR).

## Plan Review and Certification

A UST system includes both the tank and the piping. A system location that fits one or more of the following conditions must be plan reviewed and certified by the Storage Tank Unit:

- A farm or residential facility that stores motor fuel in a tank system which has an individual tank storage capacity of more than 1,100 gallons
- A facility that supplies a regulated chemical substance defined in section 101(14) of title I of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Public Law 96-510, 42 U.S.C. § 9601 et seq (CERCLA), and or petroleum products; which has an individual tank storage capacity of more than 110 gallons.
- An underground LPG tank system of any size that is used for dispensing product into tanks or vehicles or is 2,000 gallons or larger used for heating purposes.



## Basic UST System Features

A UST system is designed to store product that is compatible with all the components of the system including the tank, piping and dispenser. The system is required to have the following safety features:

- Spill protection is met by having a collection basin around the fill pipe.
- Overfill protection is provided by an automatic shutoff device in the fill pipe, an overfill alarm tied to an electronic level gauge, or a ball float valve installed in the tank side of the vent line.
- Tank Corrosion protection is provided by one or more of the following features;
  - ✓ Tank is made of a non-corrodible material
  - ✓ Steel tank must have one of the following;
    - Cathodic protection
    - Clad or encased with non-corrodible material
    - Corrosion resistant coating and cathodic protection
    - Internally lined with noncorrodible material (only for tanks installed prior to 1999)
    - Cathodic protection and interior lined with noncorrodible material.
- Piping Corrosion protection is provided by one of the following;
  - ✓ Piping is made of or encased in a non-corrodible material
  - ✓ Metallic piping is cathodically protected
  - ✓ Metallic piping has corrosion resistant coating and cathodic protection.
- Release Detection (monthly monitoring)
  - ✓ Tanks
    - Automatic tank gauging
    - Interstitial monitoring
    - SIR
    - Any other approved monthly monitoring method
  - ✓ Pipes
    - Approved monthly monitoring
    - Line leak detectors and line tightness testing

## Installation Requirements, Inspection, Registration Fees

Listed below are the plan review installation application, inspection and fee requirements for FL/CL, LPG and regulated chemicals. The form used for a UST system is the 'Notice of Proposed Installation of Underground Storage Tanks' (EQP3820) and the form for an LPG tank system is the 'Application for Installation of Liquefied Petroleum Gas Facilities' (EQP3861). Once the plan review process is complete and the UST(s) is approved for installation, the station owner or operator (O/O) will need to submit a completed UST Registration Form (EQP3821) and the designated fee. The DEQ reserves the right to inspect all tank systems, but generally inspects only the tank systems that submit plan reviews and pay fees. The DEQ will inspect a tank system when a complaint is received or violations of the rules are noted;

- A plan review is required for a farm or residential facility that stores motor fuel, to be used in a non-commercial capacity, in a tank system with a storage capacity of more than 1,100 gallons. There are no plan review fees. The UST, however, will need to be registered, inspected and the yearly registration fee is $100 a year per UST.

- A UST that is used commercially to store 110 gallons or greater of petroleum products or regulated chemicals, must be plan reviewed. There are no plan review fees. The UST will need to be registered, inspected and the yearly registration fee is $100 a year per UST.
- A plan review is necessary for all LPG container-filling locations or tanks with a water capacity greater than 2,000 gallons or two or more tanks with a water capacity greater than 4,000 gallons. The plan review fee is $203 per tank and the yearly certification fee is $61.50.
- A tank system that stores heating oil for consumptive use does not require a plan review and there are no associated fees. For more information on residential USTs, the Home Heating Oil Tank brochure is available online at www.michigan.gov/deq; on the left side of the page click on 'Key Topics', then ' Publications', scroll down to 'Land' and finally the 'Home Heating Oil Tank' brochure'.

## USTs Not in Use

A UST system may be placed in temporary out-of-use (TOU) status if there is a future planned use for the system. If the system will not be put back into service, then the UST system must be permanently closed. The O/O will need to notify the DEQ of the TOU status by amending and submitting a UST Registration form (EQP3821) and check the 'TOU' box in the 'Status of Tank' section. For a UST system that will be temporarily closed, the following regulations apply:

- ✓ The UST system must have a planned future use and will be put back into active service within 12 months.
- ✓ For systems that have contents: the corrosion protection and release detection must be maintained, the vent lines left open, the tank secured from tampering, and all other lines capped or plugged.
- ✓ If the system is empty, release detection does not need to be maintained.
- ✓ If the system has been empty for more than 30 days, the system will be considered temporarily closed.

The MUST rules allow for a change-in-service storage (CIS) for the tank system. A CIS must be approved by the Storage Tank Unit. The rules for a CIS are basically the same as the rules followed to close the system. The difference is that with a CIS, the UST system will not be removed from the ground. A CIS UST system may be subject to site assessment sampling requirements.

## Closure and Removal Requirements

Tanks that remain temporarily out-of-use for more than 12 months, and which can not meet the current new UST system or upgrade requirements are required to be permanently closed. The O/O must notify the DEQ of the intent to close the UST system 30 or more days prior to the event. The form used to notify the DEQ of the pending change is the 'Intent of Removal, Closure or Change-In-Service of Underground Storage Tanks (EQP3824)'.

At closing, the tank system is required to be emptied of liquid and sludge; and cleaned to a vapor free condition. The empty tank system must be removed from the ground. If the tank is located in close proximity to building structures and removal would jeopardize the building structure integrity, the O/O may close the tank in place. If the tank is to remain in place, it must be emptied of all product, cleaned of all sludge, and it must be filled to 100% of capacity with an inert material such as sand, pea gravel, or cement slurry. Piping must be removed from the ground if possible, or capped if removal is not possible. The UST Registration form (EQP3821) must also be amended to detail which UST(s) have been closed.

## Proper Disposal

Tanks and piping removed from the ground must be disposed of properly or recycled per DEQ rules and regulations.

## Site Assessment & Potentially Leaking Tanks

After the UST system removal, CIS or the closing of a system that will remain in the ground, sampling is required to determine if the system leaked. O/O needs to conduct sampling for the existence of a release where contamination is most likely to be present. The sampling approach is to take one discrete sample from under both ends of the tank. If water is present under the UST, then the sampler can take a water sample and partial soil sample (if obtainable). The soil under the piping must also be sampled. The requirement is to take a discrete sample every 30 feet of the underground piping run, starting at the dispenser location or the furthest point from the tank and moving towards the tank. The samples are analyzed based on the contents of the UST. If the UST contained an unknown substance then the analysis would be broad based for a total unknown chemical.

If a leak from the UST system or other contamination is confirmed from routine maintenance, site assessment, soil sampling or other activity; then a release must be reported to the DEQ. The O/O or the person employed by the same must fax or email in a confirmed release report, on the 'Release Report: Suspected/Confirmed (EQP3826)' form, to the WHMD within 24 hours of the discovery. The release can also be reported to the local DEQ district office, Remediation and Redevelopment Division (RRD). If the leak has created an emergency situation, call the Pollution Emergency Alerting System (PEAS) at 800-292-4706. The Environmental Assistance Center, 800-662-9278, can help by providing the district office number and transferring the caller to the appropriate division and staff.

## Leaking Tanks

RRD administers programs that oversee the cleanup and redevelopment of leaking underground storage tanks (LUST) sites statewide. The LUST program is very detailed and has legislated requirements including reports that must be submitted within 30 days and 365 days from the date of the release, and the closure report. The program requires the use of a Qualified Underground Storage Tank Consultant (QC) that must be obtained from the list maintained by RRD. The QC list is located on the DEQ webpage at www.michigan.gov/deq; click 'Online Services' at the top under the DEQ title, then 'Storage Tank Information Center' in the list, and finally the QC tab.

## Abandoned Tanks

Abandoned tanks can be found throughout Michigan, in rural and urban settings. UST systems were used at gas stations, manufacturing operations and governmental institutions such as prisons, school bus, and municipal garages. Many problems are associated with the locations of abandoned tank such as unsafe buildings, abandoned tires, garbage, abandoned barrels with waste oils and unplugged wells. Abandoned tanks can also cause ground water contamination, unsafe surfaces as the tanks break down, and exposure to chemicals. The locations of abandoned tanks have often been lost as the properties transformed into new businesses that do not utilize storage tanks. The owner(s) of the property may not have knowledge of the abandoned tanks existence. The potential owner for any property should always be aware

that there could be un-seeable hazards; chemical, biological or solid waste, in the ground or ground water. For more information concerning abandoned tanks, go to www.michigan.gov/deq, click on inside DEQ, Environmental Science & Services Division, Brownfield Redevelopment, Brownfield Basics and Abandoned Gas Stations.

## Potential Ownership

Prior to purchasing a property or existing tank system, the potential owner should consider having a phase one and phase two environmental site assessment with a possible Baseline Environmental Assessment (BEA) completed on the property. For information on purchasing a potentially contaminated property please see the DEQ BEA webpage at www.michigan.gov/bea.

## New Ownership

A new owner of an existing registered FL/CL, LPG or regulated chemical tank system is required to update and complete the tank registration form; EQP3821 form for FL/CL and regulated chemical storage or the EQP3861 for LPG. The new owner would also be obligated to pay any fees that are currently owed on the system.

## Information Resources

For information on the rules and regulations regarding the installation, maintenance, proper closing, removal of USTs, release reporting or cleanup of contamination, call the Environmental Assistance Program at 800-662-9278, or go online to www.michigan.gov/deqenvassistance.

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